

REMARKS/ARGUMENTS

A. AMENDMENTS TO THE SPECIFICATION

The text referring to the inventors on page 1 has been deleted.

B. AMENDMENTS TO THE CLAIMS

Claims 1-24 remain in this application. Claims 25-36 have been added. Claims 1, 3-9 and 11-24 have been amended to remove extraneous language, to provide antecedents for all claim elements, and to clarify the operation of the claimed invention. No new matter has been added by these amendments.

C. CLAIM REJECTIONS

Claims 7-8 and 19-24 have been rejected under 35 U.S.C. § 112 (2) as being indefinite.

Claims 1, 9, and 17 have been rejected by the examiner under 35 U.S.C. §102(e) as being anticipated by Subramaniam, (U.S. Patent 6,618,373) (herein, Subramaniam).

Claims 1-4, 9-12, and 17-20 have been rejected by the examiner under 35 U.S.C. §102(e) as being anticipated by Bhagavath, (U.S. Patent 6,501,763) (herein, Bhagavath).

Claims 5-8, 13-16, and 21-24 are objected to as dependent upon a rejected base claim, but would be allowable if the rewritten in independent form including all of the limitations of the base claim and any intervening claims.

1. Indefiniteness of Claims 7-8 and 19-24.

Applicant has made the changes suggested by the examiner to base claims 7 and 19. Based on these corrections, Applicant submits that these claims are now in compliance with the requirements of 35 U.S.C. § 112 (2).

2. Anticipation Rejections of Claims 1, 9, and 17 Citing Subramaniam

Claims 1, 9, and 17 have been rejected by the examiner under 35 U.S.C. §102(e) as being anticipated by Subramaniam. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

MPEP §2131 8th Ed. (Rev. 1).

Claim 1, as amended, recites the following limitations:

A multicast failover device comprising:

- a primary receiver for receiving packets from a primary multicast stream source;
- a secondary receiver for receiving packets from a secondary multicast stream source, wherein the primary receiver and secondary receiver receive packets simultaneously;
- a processor adapted to:
 - multicast packets received from the primary multicast stream source over an external network;
 - detect an adverse change in a primary stream packet from the primary multicast stream source;
 - select a secondary stream packet from the secondary multicast stream source in lieu of the primary stream packet when the adverse change in the primary stream packet is detected; and
 - multicast the selected secondary stream packet.

The examiner found that Subramaniam taught all of the elements of claim 1, citing the following language from that reference:

Only one server 101, 102 may be active at any one time. For redundancy purposes, many methods may be used for providing communication between a primary server 101 and a standby server 102. Primary server 101 may, at fixed intervals, send event packets via bus 110 to standby server 102 to indicate that the primary server 101 is functioning. If standby server 102 does not receive a packet from primary server 101 within a predetermined period of time, **standby server 102 activates to become the new primary server. Once activated, the new primary server takes over the functions of the previous primary server and begins to send packets at fixed intervals to another standby server to indicate that it is functioning.** Col. 4, lines 50-62. Emphasis added by bolding.

Subramaniam does not teach the simultaneous transmission of two data streams by different servers. It follows therefore that Subramaniam does not teach simultaneous receipt of two data streams at the failover device as reflected in claim 1 of the present invention (both as originally claimed and as amended). This distinguishing aspect of the present invention is clearly identified in the specification of the Application and reflected in the limitations of claim 1:

Referring first to Figure 1, the functioning of the failover device is illustrated. Multicast server A 10 and multicast server B 12, each multicast the same content over the same enterprise network 14. The two multicast servers each constitute a Real Multicast transmitting a multicast IP address and Port (RMIPP). Each multicast server multicasts stream packets having IP headers associated with the address and port of the associated server. Each RMIPP is unique in order to avoid duplicate network traffic. Thus, in Figure 1, RMIPP-A represents the multicast channel from multicast server A over which a particular data stream is broadcast. The same video stream is multicast over RMIPP-B which represents the channel over which the same data stream is broadcast but, in this case, from multicast server B 12. Specification, paragraph 26. Emphasis added by bolding.

By contrast, Subramaniam affirmatively teaches against activation of the two servers simultaneously. Subramaniam thus requires that a back up server be activated, which is not what occurs in the present claimed invention. While Applicant has amended claim 1 to clarify the limitations therein to emphasize this aspect of the claimed invention, Applicant submits that even as originally claimed, claim 1 is distinguishable over Subramaniam.

As amended, claim 1 of the present invention recites the limitations, a primary receiver for receiving packets from a primary multicast stream source, a secondary receiver for receiving packets from a secondary multicast stream source, wherein the primary receiver and secondary receiver receive packets simultaneously, and a processor adapted to select a packet from the secondary multicast stream in lieu of the packet from the primary multicast stream when an adverse change in the packet of the primary multicast stream is detected. Since these limitations are not taught or disclosed by Subramaniam, that reference does not set forth each and every element of claim 1, as amended. Claim 1, as amended is not, therefore, anticipated by Subramaniam.

Claim 9 and 17 were rejected using the same rationale as claim 1. Both claim 9, as amended, and claim 17, as amended, recite a limitation directed to receipt of the primary and secondary receiver packets simultaneously by a failover device. Since this limitation is not taught or disclosed by Subramaniam, that reference does not set forth each and every element of claim 9, as amended or claim 11, as amended. Claims 9 and 17 are not, therefore, anticipated by Subramaniam.

3. Anticipation Rejections of Claim 1-4, 9-12, and 17-20 Citing Bhagavath

Independent claims 1, 9, and 17 have also been rejected as being anticipated by Bhagavath.

The multicast repair mechanism described by Bhagavath relies on buffering of a multicast stream by multiple “retransmit servers.” The retransmit servers buffer a multicast stream at the request of a stream source wherein the request is relayed by a subscription server. The buffered stream data of the multiple servers is evaluated to determine which of the servers will have the best copy of the multicast stream data. This copy is then sent to a repair server that provides a multicast session using the copy. See, Bhagavath, Col. 3, lines 1-21.

In an alternative embodiment, the repair server also buffers the multicast data stream and monitors the data stream for errors. Upon detection of errors in the data stream, the repair server sends a request for a copy from a retransmit server. This copy is then sent to a repair server that provides a multicast session using the copy. See, Bhagavath, Col. 3, lines 22-43.

Bhagavath does not teach the simultaneous transmission of two data streams by different servers. It follows that Subramaniam does not teach simultaneous receipt of two data streams at the failover device as reflected in the claimed inventions (both as originally claimed and as amended). This distinguishing aspect of the present invention is clearly identified in the specification of the Application and reflected in the limitations of claimed inventions as previously described. Further, Bhagavath does not teach selecting a packet from the two data streams. Rather, Bhagavath teaches selecting a copy of a data stream session from among a number of buffered copies.

As amended, claim 1 of the present invention recites the limitations, a primary receiver for receiving packets from a primary multicast stream source, a secondary receiver for receiving packets from a secondary multicast stream source, wherein the primary receiver and secondary receiver receive packets simultaneously, and a processor adapted to select a packet from the secondary multicast stream in lieu of the packet from the primary multicast stream when an adverse change in the packet of the primary multicast stream is detected. Since these limitations are not taught or disclosed by Bhagavath, that reference does not set forth each and every element of claim 1, as amended. Claim 1, as amended is not, therefore, anticipated by Bhagavath.

Claims 2-4 depend from claim 1 and therefore recite all of the limitations of claim 1. For this reason, claims 2-4 are also distinguishable over Bhagavath.

Similarly, claim 9 recites the limitations, a multicast failover device connected to the enterprise network comprising a primary receiver for receiving the primary multicast stream packets, a secondary receiver for receiving a secondary multicast stream of packets, and an external network for transmitting multicast stream packets to at least one user, wherein the primary receiver and secondary receiver receive packets simultaneously. Claim 9 also teaches a multicast failover device adapted to multicast the primary multicast stream packets over the external network, detect an adverse change in a packet from the primary multicast stream, select a secondary multicast stream packet in lieu of the primary multicast stream packet when the adverse change in the primary multicast stream packet is detected, and multicast the selected packet from the secondary multicast stream. Since these limitations are not taught or disclosed by Bhagavath, that reference does not set forth each and every element of claim 9, as amended. Bhagavath does not, therefore, anticipate claim 9, as amended.

Claims 10-12 depend from claim 9 and therefore recite all of the limitations of claim 9. For this reason, claims 9-12 are also distinguishable over Bhagavath.

Claim 17 recites the limitations, receiving over an enterprise network primary multicast stream packets from a primary multicast stream server, wherein the primary stream packets comprise a first multicast IP address and port number, receiving over an enterprise network secondary multicast stream packets from a secondary multicast stream server, wherein the secondary stream packets comprise a second multicast IP address and port number, and wherein the secondary stream packets are received simultaneously with the primary stream packets. Claim 17, as amended, further teaches multicasting the primary multicast stream packets over an external network, detecting an adverse change in a packet from the primary multicast stream, multicasting a secondary multicast stream packet over the external network in lieu of multicasting the primary multicast stream packet when an adverse change in the packet of the primary multicast stream is detected.

Since these limitations are not taught or disclosed by Bhagavath, that reference does not set forth each and every element of claim 17, as amended. Bhagavath does not, therefore,

anticipate claim 17, as amended.

Claims 16-20 depend from claim 17 and therefore recite all of the limitations of claim 17. For this reason, claims 16-20 are also distinguishable over Bhagavath.

D. Allowable Subject Matter

Applicant has accepted the suggestion of the examiner and added new independent claim 25 representing original claim 5 written in independent form and including all of the limitations of original claims 1-4. New claims 26-28 depend from new claim 25 and comprise the limitations of original claims 6-8.

Applicant has also added new independent claim 29 representing original claim 13 written in independent form and including all of the limitations of claims 9-12. New claims 30-32 depend from new claim 29 and comprise the limitations of original claims 14-16.

Applicant has also added new independent claim 33 representing original claim 21 written in independent form and including all of the limitations of claims 21-24. New claims 34-36 depend from new claim 33 and comprise the limitations of original claims 21-24.

Applicant respectfully requests reconsideration of the current rejection. In view of the responses and remarks made above, Applicant further requests that that a timely Notice of Allowance be issued in this case. Should any further questions arise concerning this application or in the event the above amendments do not place the application in condition for allowance, Applicant respectfully requests a telephone interview. Attorney for the Applicant may be reached at the number listed below.

Respectfully Submitted,

By 

Jon L. Roberts
Registration No. 31,293
Elliott D. Light
Registration No. 51,948
Roberts Abokhair & Mardula, LLC
11800 Sunrise Valley Drive, Suite 1000
Reston, VA 20191
703-391-2900